

### REMARKS

Claims 18-26 are pending in the current application. In an Office Action dated March 10, 2006, the Examiner allowed claims 27-37 and rejected claims 18-26 under 35 U.S.C. 101, stating that “the claimed invention is directed to nonstatutory subject matter.”

Applicants' representative wishes to thank the Examiner for allowing claims 28-36. Applicants' representative respectfully traverses the 35 U.S.C. § 101 rejection of claims 18-26.

The Examiner asserts that claims 18-26 “are directed to a method or process for computing the value of a variable via a mathematical algorithm. The claims are not limited to a practical application of the mathematical algorithm because the result, which is the value of a variable, i.e., a number, is not a useful, concrete and tangible result. More specifically, the result is not a tangible result because it is not a real-world result.”

Please consider currently amended claim 18 as follows:

18. (currently amended) A method for computing a value, the method comprising:  
 providing input data, a program of computable functions ~~to that describe~~  
~~describes~~ computation of the value to be computed, and one or more uninstantiated  
 variables;  
 encoding the program as ~~a computable function~~ in a discrete partial recursive  
function;  
 continualizing the ~~encoded program~~ discrete partial recursive function to  
obtain a first-order, time-dependent differential equation;  
 expressing the ~~continualized, encoded program~~ first-order, time-dependent  
differential equation as a differential operator;  
for  $N$  trials,  
     realizing the differential operator in a physical medium, and  
     extracting, from the physical medium, ~~a solution for the continualized,~~  
~~encoded program~~ signals that correspond to substantiated variables; and  
 outputting the value ~~for the one or more instantiated variables~~ that corresponds  
to an average of the substantiated variables over the  $N$  trials.

Amended claim 18 has been amended to more particularly point and distinctly claim the subject matter which the Applicant regards as the invention.

Applicant submits that amended claim 18 is not directed to a mathematical

algorithm. Instead, amended claim 18 is directed to one embodiment of the present invention for interpreting and executing a program in a physical medium.

A mathematical algorithm is an abstract procedure for solving a mathematical problem. A mathematical algorithm can be expressed in many different kinds of notation, including natural language, mathematical formulas, and/or flow charts. For example, consider computing the force exerted by an object:

$$F=ma$$


where  $F$  represents the force exerted by the object,  $m$  represents the mass of the object, and  $a$  represents the acceleration of the object. A mathematical algorithm for computing the force exerted by the object in natural language may comprise the following steps:

1. Begin
2. Input: a number  $m$  for the mass of the object
3. Input: a number  $a$  for the acceleration of the object
4. Multiply  $m$  by  $a$  and store the number in  $ma$
5. End

Amended claim 18 describes a method for interpreting and executing a program in a physical medium. Note that the method can be used to execute any of an essentially limitless number of different programs. Thus, it is not directed to an algorithm. The first element of amended claim 18 states “providing input data, *a program* of computable functions that describes computation of the value to be computed, and one or more uninstantiated variables (emphasis added).” The term “program” refers to any set of instructions that can be written in a programming language. Subsequent elements in amended claim 18 refer to a method that, in accordance with one embodiment of the present invention, are directed to interpreting and executing the program in a physical medium in order to generate the value that corresponds to the program output.

In Applicant's representative's opinion, all of the claims in the current application are clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,  
Wolf Kohn and Anil Nerode  
Olympic Patent Works PLLC

  
Richard L. Bell  
Registration No. 54,614

Enclosures:

Postcard  
Transmittal in duplicate

Olympic Patent Works, PLLC  
P.O. Box 4277  
Seattle, WA 98194-0277  
206.621.1933 telephone  
206.621.5302 fax